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**Mapping Educational Leadership, Administration and Management Research 2007–2016: Thematic Strands and the Changing Landscape**

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**Mapping Educational Leadership, Administration and Management Research 2007–2016:  
Thematic Strands and the Changing Landscape**

**Abstract**

**Purpose:** This mapping review examines the development of educational leadership, administration and management (EdLAM) research by identifying thematic strands that hallmark key publications and synthesise major research findings and limitations.

**Methodology:** This study combines bibliometric and content analysis methods to review 2,347 publications from 15 core EdLAM journals published from 2007–2016.

**Findings:** The bibliometric analysis identified five EdLAM thematic strands: school leadership for enhancing students’ academic achievement and teachers’ effectiveness; leadership for educational change, accountability and promoting democratic values; leadership for social justice, equal education and narrowing achievement gaps; principal’s instructional leadership for school improvement; distributed leadership and its impact on organisational climate and teachers’ attitudes and stress. The content analysis revealed that the EdLAM research from 2007–2016 further developed the following research areas: the dynamics between leaders and teachers in leadership work, the potential risks of distributed leadership and the EdLAM challenges brought by the New Public Management and neoliberalism.

**Value:** This study depicts state-of-the-art EdLAM research. It confirms the combination of bibliometric and content analyses as a useful approach for large-scale review studies. Finally, this review suggests future research directions.

**Keywords**

Mapping review, science mapping, educational leadership, administration, management, bibliometric analysis, content analysis

## Introduction

Prior to the 1990s, educational leadership, management and administration (EdLAM) research has been mostly conducted by Anglo-Saxon scholars within Anglo-Saxon contexts (Hallinger, 2019). Since the early 2000s, an international EdLAM knowledge base has been gradually formed thanks to an increasing number of studies from emerging regions, as evidenced by a series of regional reviews covering, for example, Hong Kong 1995–2014 (Szeto et al., 2015), East Asia mid-1980s–2015 (Walker and Hallinger, 2015), Asia 1995–2012 (Hallinger and Chen, 2015), Africa up until 2016 (Hallinger, 2017), Arab societies 2000–2016 (Hallinger and Hammad, 2017) and Latin America 1991–2017 (Castillo and Hallinger, 2018).

The rapid development of EdLAM research calls for a systematic review covering both theoretical and empirical studies in both Anglo-Saxon and emerging regions. However, reviewing a large number of publications and making sense of their key findings raises a methodological challenge (Diem and Wolter, 2013; Gumus et al., 2018; Zawacki-Richter and Naidu, 2016). One solution is mixing bibliometric and content analysis methods. Two recent EdLAM reviews have applied this novel bibliometric analysis approach and yielded valuable findings (Table 1).

<Insert Table 1 here>

First, Gumus et al. (2018) reviewed 743 articles published from 1980–2014. They searched for keywords (i.e., 14 leadership models) in 15 core journals indexed in the Web of Science database. By counting the number of publications, they ranked the popularity of 14 models as follows: distributed/collaborative, instructional, teacher, transformational, curriculum, technology, transactional, ethical/moral, charismatic, administrative/managerial, strategic, authentic, visionary and servant leadership. The bibliometric analysis identified the most published scholars (e.g., Hallinger, Leithwood, Devos, Spillane and Goldring) and their research interests (i.e., distributed, instructional, teacher and transformational leadership). Gumus et al. (2018) further conducted a content analysis of 183 papers published in *Educational Administration Quarterly* (EAQ) and *Educational Management, Administration & Leadership* (EMAL). They found that until 2010, most EdLAM studies were qualitative. Driven by global accountability demands, more studies started to examine the impact of leadership models on student achievement. School principals remained the most popular research subject, while other mid-level and teacher leaders started to gain more attention. Gumus et al.'s (2018) review has two limitations. The bibliometric analysis excluded papers from the *Journal of Educational Administration*, *International Journal of Educational Management, School Leadership and Management* and *International*

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*Journal of Leadership in Education*. The content analysis only examined papers from two journals, as described above.

Second, Hallinger (2019) reviewed 1,171 articles published between 1965 and 2018 in nine SCOPUS-indexed journals. He conducted a bibliometric analysis including the keywords co-occurrence, citation and co-citation analyses. Hallinger (2019) only reviewed empirical studies from three emerging regions: Asia, Africa and Latin America. The bibliometric analysis confirmed that principal’s leadership and shared leadership on student achievement and curriculum reform were two key research themes. Other identified themes included social justice, school improvement, teacher learning, accountability and leadership development. The citation analysis identified the top 20 most-published authors (e.g., Hallinger, Walker, Oplatka, Cheng and Dimmock) and the top 20 most-cited papers. The co-citation analysis surfaced different schools of thought formed by EdLAM scholars. The limitations of Hallinger’s (2019) review were the exclusions of Anglo-American–European studies and theoretical research. His review did not aim to perform a content analysis on the literature, either.

The current study aims to supplement the above two studies with a broader review perspective (to cover more geographical regions and EdLAM topics) and a more comprehensive review method (to combine bibliometric and content analysis methods). To capture the most cutting-edge EdLAM development, the review time frame is confined to 2007–2016. The nature of the present study is a mapping review that focuses on depicting key research themes and guiding future thematic reviews (Grant and Booth, 2009). In this review, we answered the following questions: *What are the main EdLAM thematic strands, the popularity of research topics and the changes of scholars’ research interests? Which are the most cited publications in each strand? What are the major research findings and limitations in EdLAM research?*

**Methodology**

*Data sources and selection criteria*

The present review employed a two-phase mixed-methods research design. Data came from two sources: 15 core EdLAM journals indexed in the Education Resources Information Centre (ERIC) database and key publications recommended by experts.

To collect the first dataset, we searched for the keywords *educational leadership*, *educational administration* or *educational management* in 15 peer-reviewed EdLAM journals and found 9,322 articles. Gumus et al. (2018) found that EdLAM research had increased in quantity and diversity within the time frame 2007–2016. Hence, we set the review time frame to this decade and obtained 3,769 results. For the empirical

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3 studies, we only reviewed K-12 EdLAM research, excluding articles about higher, special, early childhood,  
4 adult or vocational education. In total, the first dataset contained 2,263 journal articles (Table 2).

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7 <Insert Table 2 here>  
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10 The second dataset contained 120 publications recommended by 46 scholars from 15 countries. All these  
11 scholars have been actively publishing EdLAM research, including the most-published scholars as identified by  
12 Gumus et al. (2018) and Hallinger (2019). An open-ended online survey collected their recommendations for the  
13 top three most influential EdLAM publications. Of the 120 recommendations, there were 89 journal articles, 25  
14 books, four project reports and two conference proceedings. Notably, 36 of the 89 journal articles overlapped  
15 with the first dataset. The remaining 53 were published in other educational journals (e.g., *Journal of*  
16 *Educational Change*, *International Encyclopaedia of Education*, *International Perspectives on Education and*  
17 *Society*) or published before 2007. Because a mapping review relies on an extensive search of relevant studies,  
18 we merged the two datasets and reviewed 2,347 publications in total (Grant and Booth, 2009).  
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### 27 *Bibliometric analysis*

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29 Bibliometric analysis identifies research patterns from a large corpus of publications and serves as the  
30 foundation for in-depth content analysis (Diem and Wolter, 2013). Bibliometric analysis software can calculate  
31 and visualise patterns from bibliometric information, such as keywords, authors, journals and the year of  
32 publication (van Eck and Waltman, 2010, 2011).  
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38 In the current study, the first-phase bibliometric analysis began with transferring bibliographic information  
39 (i.e., article title, author, publication year, journal, keywords and abstract) of all the 2,347 publications to a  
40 reference management programme: Zotero. Using the Zotero 'tags' function, each publication was  
41 systematically coded in terms of the research subject (e.g., principals, superintendents or teachers), method (e.g.,  
42 longitudinal, comparative, qualitative, quantitative, mixed-methods, interviews or surveys), context (e.g.,  
43 country, region or type of school) and topics (e.g., instructional leadership, school improvement,  
44 transformational leadership). Zotero automatically imported the keywords chosen by the original authors to the  
45 tag repertoire. When certain tags were missing, we skimmed the original publications and coded them.  
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53 Next, we exported the tag repertoire from Zotero to the visualisation of similarities (VOS) software,  
54 VOSviewer version 1.6.5. We conducted a keywords (i.e., tags) co-occurrence analysis (Van Eck and Waltman,  
55 2017). This produced three distance-based maps: the network map, the density map and the timeline map.  
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First, the network map visualises the interconnectedness among keywords and their association strengths. The calculation is based on the following equation: the similarity between the items  $i$  and  $j$  ( $S_{ij}$ ) equals the ratio between the observed number of co-occurrences of items  $i$  and  $j$  ( $C_{ij}$ ) and the expected number of co-occurrences of items  $i$  ( $W_i$ ) and  $j$  ( $W_j$ ), assuming the occurrences of items  $i$  and  $j$  are statistically independent (Van Eck and Waltman, 2010, p.531).

$$S_{ij} = \frac{C_{ij}}{W_i W_j}$$

VOSviewer performed the clustering calculation using the equation described above, generating a network map. Here, each keyword is a node. The more frequently a keyword was mentioned in the literature, the bigger the node is. If both keywords co-occurred in at least five reviewed publications (i.e., threshold=5), a link was created between them. The distance between the nodes indicates their relatedness. The more publications containing both keywords, the shorter the distance between them. As a result, each group of closely linked nodes formed a specific colour-coded cluster. Keywords with the same colour are strongly related to each other (Van Eck and Waltman, 2017).

Second, the density map visualises the frequency of keywords shown in the literature. The keywords distribution is identical to the network and timeline maps. Ranging from blue (the least frequent) to red (the most frequent), different colours indicate the prevalence of EdLAM topics. Third, the timeline map visualises the changes in researchers' interests. For each keyword, VOSviewer calculated the average year of publishing of all the articles that contained this keyword. The results are shown in blue (i.e., published around 2007) to red (i.e., published around 2016) in the timeline map (Van Eck and Waltman, 2010, 2011).

Using Harzing's Publish or Perish 5.28 bibliometric software, we conducted a citation analysis to identify prominent authors and publications in the EdLAM field (Hallinger, 2019). We ranked the 15 most-cited publications in each thematic strand according to their accumulated citations from 2007–2016.

*Content analysis*

The second-phase content analysis scrutinised key EdLAM publications in each strand inductively. We applied Hallinger's (2013) review framework to code central topics, research questions, conceptual perspective, data sources and types, data interpretation, major results, limitations and implications; this was done to the 15 most-cited publications in each thematic strand. For the rest of the publications, we examined their central topics, key findings and limitations.

**Findings**

*Network map: five thematic strands*

The keywords co-occurrence analysis identified five EdLAM thematic strands (Figure 1). In each strand, some keywords functioned as hubs (circled on the map) through which other keywords were intensively linked.

<Insert Figure 1 here>

The five thematic strands are as follows:

- School leadership for enhancing students' academic achievement and teachers' effectiveness (shown in red, 114 tags)
- Leadership for educational change, accountability and promoting democratic values (green, 88 tags)
- Leadership for social justice, equal education and narrowing achievement gaps (blue, 77 tags)
- Principals' instructional leadership for school improvement (yellow, 72 tags)
- Distributed leadership and its impact on organisational climate and teachers' attitudes and stress (purple, 67 tags)

*Density map: prevalence of research topics*

The density map indicated the most frequently researched topics (red) were, for example, *principals*, *instructional leadership*, *educational change*, *accountability* and *role*. (Figure 2) (Van Eck and Waltman, 2010).

<Insert Figure 2 here>

Topics such as *administrators' attitudes*, *school effectiveness*, *school improvement*, *leadership styles*, *educational environment* and *academic achievement* were also frequently investigated (orange). Close to the edge of the map, topics like *social change*, *inclusive schools* and *educational planning* were understudied (light blue).

*Timeline map 3: changes of researchers' interests*

The timeline map revealed the changes in scholars' research interests from 2007 (dark blue) to 2016 (red) (Figure 3).

<Insert Figure 3 here>

For instance, *instructional leadership* (dark blue) appeared topical around 2008. Following that, *personality traits* (light blue) became popular around 2010, suggesting the individual leader's intrinsic characteristics to be



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research foci. Between 2010 and 2012, scholars showed interest in measuring *educational improvement*, *teacher effectiveness* and *academic achievement*. Meanwhile, *professional development* and *participatory decision-making* became buzzwords. Later, *transformational leadership* (yellow) gained traction around 2013, and the effect of *neoliberalism* (orange) on EdLAM practices became topical around 2014.

**Content analysis findings**

*Thematic strand 1: school leadership for enhancing students’ academic achievement and teachers’ effectiveness*

The first thematic strand dealt with the impact of school leadership on students’ academic achievement and teachers’ effectiveness (Table 3).

<Insert Table 3 here>

One noteworthy discovery was the indirect but significant impact exerted by leadership on students’ academic achievement as mediated by teachers’ instructional effectiveness (Heck and Hallinger, 2014; Leithwood and Mascall, 2008; Robinson et al., 2008). The positive correlations among school leadership, teachers’ instruction and students’ learning confirmed the necessity of having leadership at all levels (Leithwood et al., 2008; Robinson et al., 2008). Specifically, teachers’ instructional leadership was proven to exert the most direct and significant impact on students’ learning. Teachers’ instructional leadership was related to their subject knowledge, expectations of students, job satisfaction and professional relationship with the principal (Supovitz et al., 2010). In addition, principals’ instructional leadership mattered. By calculating the effect size, Robinson et al. (2008, p. 655) discovered the impact of instructional leadership to be three to four times greater than that of transformational leadership on students’ learning. When exercising instructional leadership, principals focused directly on instruction-related activities while performing transformational leadership, and they led through setting directions, developing teachers’ capacity and redesigning school structure (Leithwood and Jantzi, 2006; see also Robinson et al., 2008).

This strand of research had two limitations. First, many studies measured leadership effectiveness by students’ academic achievement in, for example, numeracy and reading. Only a few studies accounted for students’ non-academic achievement, such as social and attitudinal outcomes (Heck and Hallinger, 2010; Leithwood and Jantzi, 2006; Robinson et al., 2008). Second, different research designs yielded different results. We found a considerable variety in choosing the school-, classroom- and student-level variables for control. Studies varied in terms of using longitudinal or cross-sectional data, building direct or indirect effect modelling

and measuring perceived leadership or leadership in practice. For instance, Heck and Hallinger (2014) found an indirect but significant correlation between leadership and students' math performance 'fully rather than partially mediated' by the instructional environment and teachers' teaching (p. 673). Because of the mediators, they argued that the studies using direct-effect modelling hardly yielded any statistically significant findings. Heck and Hallinger (2014) also underlined the possible biases of using a self-reported survey to measure teaching and the perceptions of leadership. By contrast, Lee, Walker and Chui (2012) used cross-sectional data and controlled fewer student-level variables; their findings showed that instructional leadership could enhance learning by boosting students' attachment to school, while direct instructional supervision appeared to undermine learning.

*Thematic strand 2: leadership for educational change, accountability and promoting democratic values*

In this strand, the content analysis showed that leading educational changes took place at both the macro and micro levels. Table 4 lists the 15 most-cited publications.

<Insert Table 4 here>

These changes focused on implementing rigid accountability and promoting democratic values. At the macro level, Fullan (2009) reviewed large-scale educational reforms in England, Canada, the U.S. and Finland prior to 1997, between 1997 and 2002 and between 2003 and 2009. These reforms moved from segmented fine-tunings to system-level transformations. He predicted that the old leadership practices featuring a definitive vision, a leader-centred perspective and a competitive culture would be replaced by new leadership practices featuring a broad vision, a distributive perspective and a collaborative culture. Also, at the macro-level, Ball (2008), Bush (2008) and Ranson (2008) problematised privatisation and marketisation in the New Public Management era. Here, privatisation refers to incorporating business efficiency models to measure educational performance growth and competitiveness, collaborating with consultancy companies to formulate educational policies and engaging private providers to diversify the education market (Ball, 2008, 2009). Marketisation manifested in consumers' choices, performance-based accountability and quasi-market competition (Branson, 2008). Both privatisation and marketisation were endorsed in educational policies and reforms (Bush, 2008). Gunter and Fitzgerald (2013) defined neoliberal ideology as individuals and educational institutions conducting trades to form a marketised competitive network. For neoliberals, the New Public Management means introducing business practices and a free market into educational administration and using private schools to compete with public schools.

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In Ärlestig et al.'s (2016) edited book, scholars from 24 countries all reported varying school leadership challenges brought about by the New Public Management and neoliberalism. For example, school principals faced conflicting demands; they were held accountable for excelling in external competition and for promoting equity, social justice and democratic values within the school. Educational policies, however, remained vague and rhetorical, which offered little help to resolve these conflicts (Daly, 2009; Shields, 2010). Finland appeared to be one exception by having a broader concept of learning, more individualised curricula, more trust in teachers, less top-down accountability and less high-stakes testing (Sahlberg, 2007, 2010).

On top of the macro-level changes, scholars also investigated educational changes at the micro level. Tschannen-Moran (2009) discovered that to transform schools into equity-driven professional communities, leaders should incorporate democratic values, trust, professional efficacy and shared responsibilities. To lead changes at the school level, a successful principal should treat teachers as equal professionals and empower them to decide on their pedagogical work (Tschannen-Moran, 2009). Wahlstrom and Louis (2008) offered school-level advice for leading changes, discovering that teachers did not judge their principal's trustworthiness according to the principal's teaching expertise but to his/her attitude about the pedagogical and leadership work; Leading school-level changes required leaders to acquire skills of leading both people and tasks.

Regarding the research limitations of this thematic strand, most studies were theoretical papers (e.g., Ball, 2009; Hargreaves and Fink 2008). Some empirical studies tended to employ policy analysis or case studies (e.g., Cooper, 2009; Fullan, 2009; Muijs and Harris, 2007). Two exceptions were Daly (2009) and Tschannen-Moran (2009). Daly (2009) conducted a mixed-methods study and found that trust and leadership predicted teachers' and site administrators' threat-rigid responses (i.e., when under threat, teachers tend to limit options and information flow, constrain decision-making and increase stress). Daly (2009) pointed out a lack of validated quantitative instruments in the field and his exploratory study needed further studies with a larger sample. Tschannen-Moran's (2009) quantitative study confirmed the correlations among teachers' professionalism, principals' professional orientation and faculty trust. Although Tschannen-Moran's (2009) instrument was validated in her earlier studies, it was mainly applied at the school level. In terms of measuring the impact of large-scale national and local educational reforms, more diverse research instruments and empirical studies are needed.

*Thematic strand 3: leadership for social justice, equal education and narrowing achievement gaps*

The third strand examined how EdLAM enhanced marginalised students' performance and promoted social justice. Table 5 presents the 15 most-cited publications.

<Insert Table 5 here>

In different contexts, marginalised students had different meanings. In the U.S., researchers focused on schools with large African American or Hispanic populations (Bone et al., 2011; Irby, 2014; Rojas-LeBouef and Slate, 2011; Theoharis, 2007; Zisselsberger and Collins, 2016). European studies conducted in Belgium (Mahieu and Clycq, 2007), Greece (Saiti, 2007), the Netherlands (Leeman, 2007) and Slovenia (Trnavcevic, 2007) investigated how school leaders supported students with immigrant backgrounds. In Australia (Ewington et al., 2008), Canada (Goddard and Hart, 2007), China (Militello and Berger, 2010; Xie, 2011), England (James et al., 2011) and Pakistan (Ahmad Salfi and Saeed, 2007), researchers investigated the impact of school leadership on students with a low socioeconomic status.

Scholars agreed that many marginalised students faced multiple disadvantages related to ethnicity, language, race, disability, gender, sexual orientation and social class. Correspondingly, school leaders and teachers working in these contexts faced multiple challenges (Bone et al., 2011; Mulford and Silins, 2011; Theoharis, 2007). School principals' social justice leadership was mediated by teachers' attitudes and pedagogical work (Leithwood and Jantzi, 2000; Mulford and Silins, 2011; Silins and Mulford, 2002). The research suggested principals become value leaders and support teachers in teaching social justice in class (Darling-Hammond and Friedlaender, 2008; Day, Sammons and Hopkins, 2009; McKenzie, et al., 2008). In response to these challenges, strategies such as developing disadvantaged students' social skills, empowering students as independent learners and using social support and care to enhance academic achievement were proposed (Cooper, 2009; Mulford and Silins, 2011; Theoharis, 2007).

The second key finding was derived from the International Successful School Principal Project (ISSPP). The ISSPP started in 2001 with three research themes: successful school principals, principals of underperforming schools and principal identities. By 2016, scholars from 25 countries had conducted case studies for the project. In 2007–2016, the focus was shifted to principals turning around failing schools and promoting social justice. The following strategies were found useful in recent ISSPP studies: detracting students, building heterogeneous student groups, increasing teachers' expectations for all the students, empowering teachers to address and resolve issues of social justice and equity in school and engaging marginalised families in home–school collaborations (Ewington, et al., 2008; Mulford and Silins, 2011; Uline and Tschannen-Moran, 2008).

During the review, we found two research limitations: a lack of research into hidden inequality and the resistance to social justice leadership. McKenzie et al. (2008) claimed that the existing evaluation policies

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tended to neglect schools’ contributions to promoting social justice and equity. The most academically successful schools received better resources although they often failed to reach out to the most marginalised student groups. There was a lack of studies revealing this hidden inequality. Moreover, Theoharis (2007) found that social justice leaders often faced resistance from privileged students and parents regarding the school’s inclusion policy. Sometimes, teachers also opposed inclusion to avoid increased workload and complexity. Educational policies endorsing social justice and equity often fail to help schools tackle daily challenges (Mulford and Silins, 2011; Uline and Tschannen-Moran, 2008).

*Thematic strand 4: principals’ instructional leadership for school improvement*

Since the 1970s, school effectiveness research and leadership research have merged. Principals’ instructional leadership for enhancing school effectiveness and improvement formed a thematic strand (Lezotte, 2001; Neumerski, 2013). Table 6 presents the key publications in this strand.

<Insert Table 6 here>

Since Hallinger (1982, 1990, 2011b) devised the Principal Instructional Management Rating Scale (PIMRS), over 200 studies have applied it to measure principals’ instructional leadership effectiveness. These studies repeatedly confirmed the principal’s central role in leading teaching and learning. Here, a successful instructional leader needed to balance three key functions: defining school’s mission, managing the instructional programme and building a positive school environment (Hallinger, 2005; Leithwood and Seashore-Louis, 2011). Mangin (2007) supplemented the above findings by identifying the links among principals’ knowledge, interactions with teachers and support of teacher leadership; she found that the more knowledge a principal had about his or her role as a leader, the more he or she interacted with teachers and the better he or she supported teacher leadership. The principal’s instructional leadership manifested in seeing teachers as resources for school improvement and communicating high expectations for teachers’ instructional improvement. Other studies echoed that effective instructional principals were those who understood and supported teacher leadership (Crum and Sherman, 2008; Leithwood and Sun, 2012; Murphy, et al., 2009). Murphy, et al. (2007, p.179) reviewed studies of high-performing principals and superintendents; they summarised eight key dimensions of principal’s instructional leadership: a vision for learning, instructional programme, curricular programme, assessment programme, communities of learning, resource acquisition and use, organisational culture and advocacy.

All the above studies discussed what a principal should do to become an instructional leader. By contrast, other scholars challenged this principal-centric perspective. Spillane and Healey (2010) underlined that leaders did not work in isolation but constantly interacted with each other. Robinson et al. (2008) were concerned about instructional leadership becoming a managerial imperative. Neumerski (2013) criticised the compartmentalisation of principal leadership, teacher leadership and instructional leadership in research. Murphy et al. (2007) asserted that learning-centred instructional leadership prevailed over other leadership models. Nevertheless, they failed to contextualise instructional leadership in different school settings.

Drawing on these critics, we found that this research strand fell short of providing information about various contextual factors affecting the principal's instructional leadership. For example, Mangin (2007) mentioned that scholars knew little about how external testing pressures and structural, historical, political, curricular and personal contexts affected the principal's instructional leadership. Goldring and colleagues (2008) also discovered that principals' instructional leadership was context-dependent rather than individual-dependent. So far, the existing literature has not provided findings of these enabling or disabling contextual factors for instructional leadership.

#### *Thematic strand 5: distributed leadership and its impact on organisational climate and teachers' attitudes and stress*

The fifth thematic strand contained studies about distributed leadership and its impact. Table 7 encapsulates the most-cited publications.

<Insert Table 7 here>

One key finding of distributed leadership studies was confirming the leadership potentials in teachers (Eyal and Roth, 2011; Price, 2012; Printy, 2008). Harrison and Killion (2007) claimed that teachers' roles had been expanded and enriched to incorporate leadership elements. Besides teaching subject knowledge, teachers also acted as leaders, mentors, curriculum specialists, resource providers and catalysts for change in school. A Canadian study revealed that when leadership was distributed purposefully and aligned with the school's overall goals, teachers trusted their leaders, showed higher collective efficacy and prioritised learning (Mascall, et al., 2008). In Singapore, a study showed that distributed leadership and transparent teacher appraisal can enhance teachers' job satisfaction and reduce work-related stress (Kelly, Ang, Chong, et al., 2008). In Belgium, Hulpia and colleagues (2011) found that teachers' involvement in school decision-making predicted their organisational commitment. In the U.S., Harris and DeFlaminis (2016) confirmed distributed leadership exerted a positive



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impact on building leadership capacity and securing teacher effectiveness. These normative studies showed a positive impact exerted by distributed leadership on school climate and teachers. However, to achieve these positive results, distributed leadership should be purposefully designed. For example, having clear guidance and strong support from a well-coordinated leadership team were vital.

Taking a critical viewpoint, other scholars warned about the problems of distributed leadership. Crawford (2012) asserted that distributed leadership in policy remained as rhetoric. Flessa (2009) found that distributed leadership can be misused to increase teachers’ burden and distract them from teaching. In Flemish schools, Piot and Kelchtermans (2016) discovered that micro-politics were pervasive in distributed leadership because different stakeholders sought different interests. Årlestig et al. (2016) found that most principal training programmes, professional standards and job descriptions still focused on principals’ role and functions. Very few leadership development programmes offered research-informed training to prepare school principals and teachers to work in distributed leadership settings (Harris and DeFlaminis, 2016).

As to the limitations, most studies overlooked power relations and conflicts in distributed leadership (Bolden, 2011; Tian et al., 2016). Seeing distributed leadership as an apolitical phenomenon, scholars have had little understanding of the use and abuse of power in practice (Lumby, 2013). Another limitation was the absence of research on preparing teachers for distributed leadership. Most studies have focused on how principals practised distributed leadership (Harris and DeFlaminis, 2016). However, little is known about how to develop teachers’ leadership capacities through preservice and in-service training (Kelly et al., 2008).

**Discussion**

This review mapped EdLAM development from 2007–2016. The bibliometric analysis identified five EdLAM thematic strands, most-studied topics, changes of scholars’ research interests and the most-cited publications. The content analysis yielded key research findings and limitations in each thematic strand. Several of the most-cited publications (e.g., Cooper, 2009; DiPaola and Tschannen-Moran, 2001; Hallinger, 2011c) were listed in two strands, suggesting the five thematic strands overlap. This echoed the bibliometric network map in which we found boundary-spanning keywords (e.g., educational change, transformational leadership and instructional leadership) connecting several clusters. Hallinger (2019) discovered the same phenomenon in his author co-citation analysis; the overlapping publications were the ones bridging several thematic strands and exerted a strong impact on EdLAM development. The clustering of the five thematic strands was based on the accumulated keywords relatedness in the whole corpus (Van Eck and Waltman, 2017). This bibliometric analysis result is not in conflict with a small number of articles containing keywords from multiple clusters.

The development of EdLAM research from 2007–2016 is a continuation of previous research traditions. Before 2007, studies have shown principals' indirect but significant impact on students' learning (Heck and Hallinger, 2005), the shift from formal leaders' actions to the interactions among leaders, followers and situation (Gronn, 2002; Spillane et al., 2004), the contingency between school contexts and leadership styles (Hallinger, 2003) and the effectiveness of transformational leadership (Leithwood and Jantzi, 2006; Murphy, 2002).

Our review found new evidence to supplement these findings. First, before 2007, leadership practice was proposed as a new unit of analysis (Gronn, 2002). In the past decade, new evidence revealed how practice-centric leadership actually functioned. For instance, the research found the coherence of a leadership team more important than the individual leader's actions (Hulpia et al. 2011). If the school leadership team aimed to effectively engage teachers in the decision-making process, they should provide cohesive support, respect teachers' pedagogical expertise and treat teachers with fairness (Harris and DeFlaminis, 2016; Kelly et al., 2008).

Second, prior to 2007, scholars focused on conceptualising distributed leadership (Bennet et al., 2003; Harris, 2003). After this period, studies explored both the benefits and potential risks of distributed leadership in practice (Hargreaves and Fink, 2008). Teachers' agency has been regarded as untapped resources for schools. Recent studies problematised the idea of turning distributed leadership into a managerial tool. Burdening teachers with unwanted and excessive administrative tasks and distracting teachers from their teaching were seen as an abuse of power (Lumby, 2013). These critical voices urge scholars, practitioners and policy makers to reflect on teachers' priority work when imposing distributed leadership on teachers (Crawford, 2012; Flessa, 2009).

Third, before 2007, it was mostly British and American scholars addressing the neoliberal challenges to EdLAM (Biesta, 2004; Wells et al., 2002). The past decade witnessed the growing impact of the New Public Management and neoliberalism on educational systems worldwide. Many countries have introduced high-stakes accountability and rigid competition into their education systems in the hope of improving school quality (Ärlestig et al., 2016). In practice, however, school principals and teachers faced challenges of balancing between excellence and equity, between students' academic achievement and their holistic development and between standardisation and diversity. Many educational policies appeared rhetorical, elusive and contradictory. As a result, principals and teachers felt poorly prepared for these new challenges (Branson, 2008; Ranson, 2008).



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Our findings also supplemented several earlier review studies. Gumus et al. (2018, p.13) discovered that following a decline, instructional leadership studies started to grow again after 2005 because of the increasing accountability demands on improving students' learning outcomes. Meanwhile, distributed leadership became prevalent in 2005. Transformational leadership studies peaked in the early 1990s and then started to decline (Gumus et al., 2018). Our study echoed Gumus et al.'s (2018) findings with two exceptions. We found leadership for social justice to be a distinctive thematic strand. The definitions and applications of social justice leadership were context dependent (McKenzie et al., 2008). Also, unlike Gumus et al. (2018), we observed that transformational leadership became topical again around 2013 and had a closer link to distributed leadership (Hallinger and Heck, 2010; Harris et al., 2007).

Like Hallinger (2019), we used VOSviewer bibliometric analysis software. Compared with Hallinger's (2019) keywords co-occurrence, citation and co-citation analyses, we only executed a keywords co-occurrence analysis to generate five thematic strands. On top of that, we also performed a content analysis to synthesise key research findings and limitations, which Hallinger's (2019) review did not provide. Both studies identified core journals in the EdLAM field. Hallinger (2019) collected data from nine journals, while we reviewed studies from 15 journals. Two journals on Hallinger's (2019) list were excluded in our study. We excluded the *School Organisation* because its publication stopped after 1996. The *School Effectiveness and School Improvement* was excluded because its title did not directly indicate EdLAM as a focus. However, the journal's aims and scope include school ethos and leadership as one research area. Future EdLAM reviews are advised to include this journal.

Sun and Leithwood (2015) conducted a meta-analysis to review direction-setting leadership (combining goal setting and communicating high expectations) studies; they found that direction-setting leadership did not have a statistically significant and direct impact on student achievement. This was in agreement with our review findings that leaders' impacts were largely mediated by teachers. Sun and Leithwood (2015) used a power index to test the principals' magnitude of impact and concluded that principals exercised more power by defining goals than by communicating high expectations to teachers. To some extent, this conclusion provided answers to the understudied power issues in EdLAM research, as identified in our study.

**Limitation and future research**

The future research calls for more thematic reviews to gain a nuanced understanding of the five EdLAM thematic strands. Using the same bibliometric and content analysis methods, scholars can map the EdLAM research development in different geographic regions. The research limitations identified in each thematic

strand, such as the understudied power issues and the impact of instructional leadership, can be further explored.

Finally, our review has several limitations. To make the workload manageable, the literature selection was limited to K-12 EdLAM studies published in English from 2007–2016. Publications from *School Effectiveness and School Improvement* were excluded. Five league tables of the most-cited publications favoured papers published in earlier years. Owing to the word limit, key research findings and limitations of each thematic strand were mainly based on these most-cited publications. Readers should examine them critically.

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## TABLES

Table 1. A comparison of three EdLAM reviews

	<b>The present study</b>	<b>Gumus et al. (2018)</b>	<b>Hallinger (2019)</b>
<b>Timeframe</b>	2007-2016	1980-2014	1965-2018
<b>Sources (EdLAM core journals)</b>	15	15	9
<b>Database</b>	ERIC	Web of Science	SCOPUS
<b>Searching keywords</b>	Educational leadership, educational management, educational leadership, K-12 education	Distributed/collaborative, instructional, teacher, transformational, curriculum, technology, transactional, ethical/moral, charismatic, administrative/managerial, strategic, authentic, visionary or servant leadership	Latin American, African or Asian countries, K-12, higher education
<b>Bibliometric analysis</b>	2347 articles	743 articles	1171 articles
<b>Content analysis</b>	75 most cited publications in five themes	183 articles in EAQ and EMAL	N/A
<b>Review focus</b>	EdLAM research themes, change of research interests, most cited publications and key findings	EdLAM research on 14 leadership models and most published scholars	EdLAM research in Asia, Africa and Latin America, most cited scholars, publications and author co-citation

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**Table 2. Fifteen core EdLAM journals, number of articles, publishing country, h-index and publication coverage**

Journal	Number of articles	Publishing country	H-index / Affiliated organisation	Publication coverage since
Journal of Research on Leadership Education	11	U.S.	NA / UCEA publication	2006
Journal of Education Policy	50	U.K.	60	1986
Leadership and Policy in Schools	93	U.K.	12	2010
International Journal of Leadership in Education	96	U.K.	29	1998
Journal of Educational Administration and History	113	U.K.	13	2010
Journal of School Leadership	118	U.S.	16	1991
International Journal of Educational Leadership Preparation	130	U.S.	NA / NCPEA publication	2006
International Journal of Educational Management	132	U.K.	40	2005
Journal of Cases in Educational Leadership	140	U.S.	NA / UCEA publication	1998
Management in Education	151	U.K.	11	1987
School Leadership & Management	155	U.K.	35	1996
Educational Administration Quarterly	157	U.S.	60	1965
Journal of Educational Administration	207	U.K.	46	1963
Educational Management Administration & Leadership	220	U.K.	31	2003
Educational Leadership	490	U.S.	47	1994

**Table. 3. Thematic strand 1: Top 15 most cited publications 2007-2016.**

Citations	Citations / Year	Authors
2232	279	Leithwood, Harris and Hopkins (2008)
2120	265	Robinson, Lloyd and Rowe (2008)
1204	172	Darling-Hammond and Richardson (2009)
832	104	Wahlstrom and Louis (2008)
743	83	Darling-Hammond, LaPointe, Meyerson, Orr and Cohen (2007)
705	101	MacNeil, Prater and Busch (2009)
648	81	Leithwood and Mascall (2008)
608	101	Hallinger and Heck (2010)
582	97	Supovitz, Sirinides and May (2010)
550	110	Hallinger (2011c)
466	58	Harris (2008)
410	27	DiPaola and Tschannen-Moran (2001)
409	82	Thoonen, Slegers, Oort, Peetsma and Geisel (2011)
284	32	Harris, Leithwood, Day, Sammons and Hopkins (2007)
256	28	Townsend (2007)

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**Table 4. Thematic strand 2: Top 15 most cited publications 2007-2016.**

Citations	Citations / Year	Authors
832	104	Wahlstrom and Louis (2008)
608	68	Sahlberg (2007)
545	78	Tschannen-Moran (2009)
481	80	Shields (2010)
415	59	Ball (2009)
415	59	Fullan (2009)
400	44	Halverson, Grigg, Prichett and Thomas (2007)
304	51	Sahlberg (2010)
280	31	Muijs and Harris (2007)
272	34	Bush (2008)
268	38	Daly (2009)
215	31	Cooper (2009)
200	25	Goldring, Huff, May and Camburn (2008)
146	18	Hargreaves and Fink (2008)
115	14	Ranson (2008)

**Table 5. Thematic strand 3: Top 15 most cited publications 2007-2016.**

Citations	Citations / Year	Authors
955	106	Theoharis (2007)
550	110	Hallinger (2011c)
410	27	DiPaola and Tschannen-Moran (2001)
372	47	McKenzie, Christman, Hernandez, et al. (2008)
357	45	Uline and Tschannen-Moran (2008)
351	88	Furman (2012)
310	44	Levinson, Sutton and Winstead (2009)
303	43	Jean-Marie, Normore and Brooks (2009)
250	28	Howard (2007)
221	25	Evans (2007)
215	31	Cooper (2009)
212	30	Yilmaz and Taşdan (2009)
205	29	Supovitz (2009)
202	25	Darling-Hammond and Friedlaender (2008)
196	28	Stoll (2009)

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**Table 6. Thematic strand 4: Top 15 most cited publications 2007-2016.**

Citations	Citations / Year	Authors
377	127	Neumerski (2013)
370	93	Leithwood and Sun (2012)
364	61	Moolenaar, Daly and Slegers (2010)
288	72	Sebastian and Allensworth (2012)
275	31	Murphy, Elliott, Goldring and Porter (2007)
266	30	Mangin (2007)
251	50	Hallinger (2011a)
222	25	Taylor, Martin, Hutchinson and Jinks (2007)
219	44	Orr and Orphanos (2011)
208	42	May and Supovitz (2011)
200	25	Goldring, Huff, May and Camburn (2008)
200	29	Murphy, Smylie, Mayrowetz and Louis (2009)
191	21	Marks and Nance (2007)
189	24	Crum and Sherman (2008)
148	19	DuFour and Marzano (2009)

**Table 7. Thematic strand 5: Top 15 most cited publications 2007-2016.**

Citations	Citations / Year	Authors
689	138	Bolden (2011)
575	72	Harris and Spillane (2008)
466	58	Harris (2008)
458	57	Gronn (2008)
385	43	Scribner, Sawyer, Sheldon and Myers (2007)
333	42	Mayrowetz (2008)
323	40	Printy (2008)
317	35	Harrison and Killion (2007)
295	74	Price (2012)
279	40	Cosner (2009)
276	55	Eyal and Roth (2011)
253	28	Harris (2007)
181	23	Mascall, Leithwood, Strauss and Sacks (2008)
170	34	Hulpia, Devos and Van Keer (2011)
140	47	Lumby (2013)



**Figure 1. Network map: five thematic strands.**

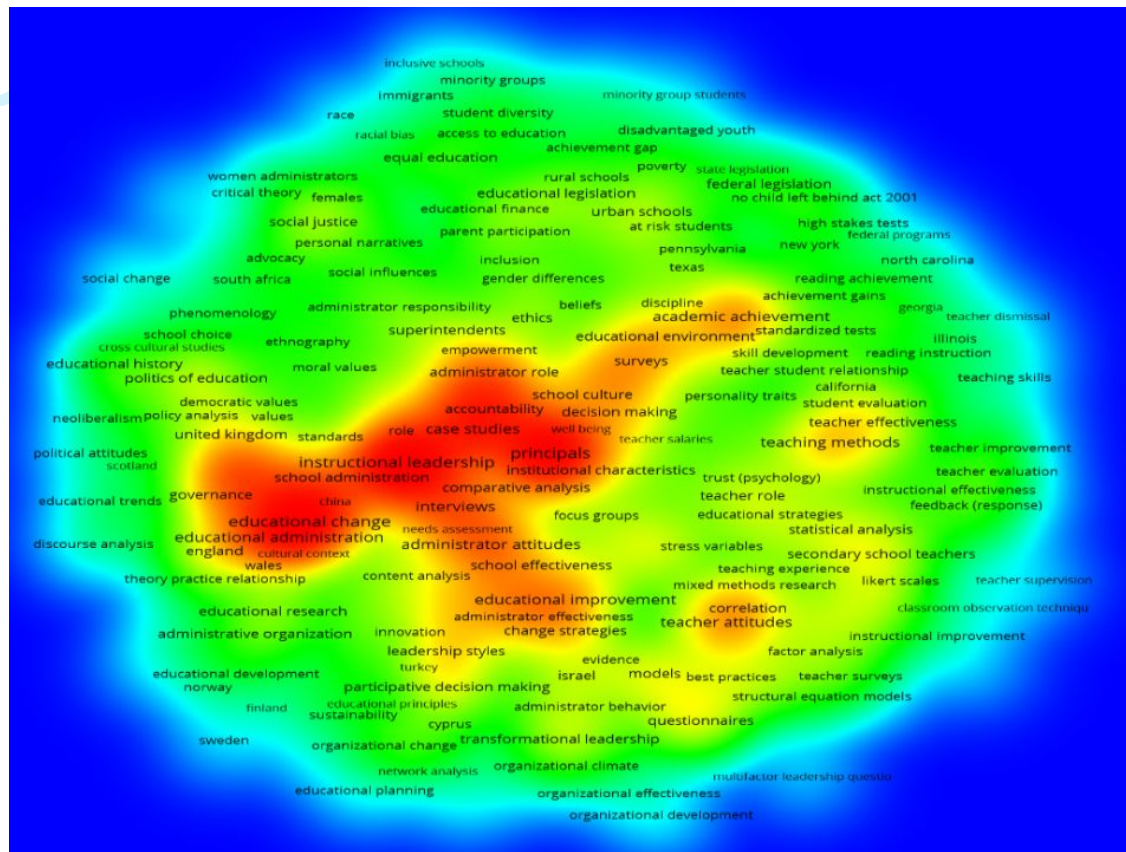


Figure 2. Density map: prevalence of research topics.

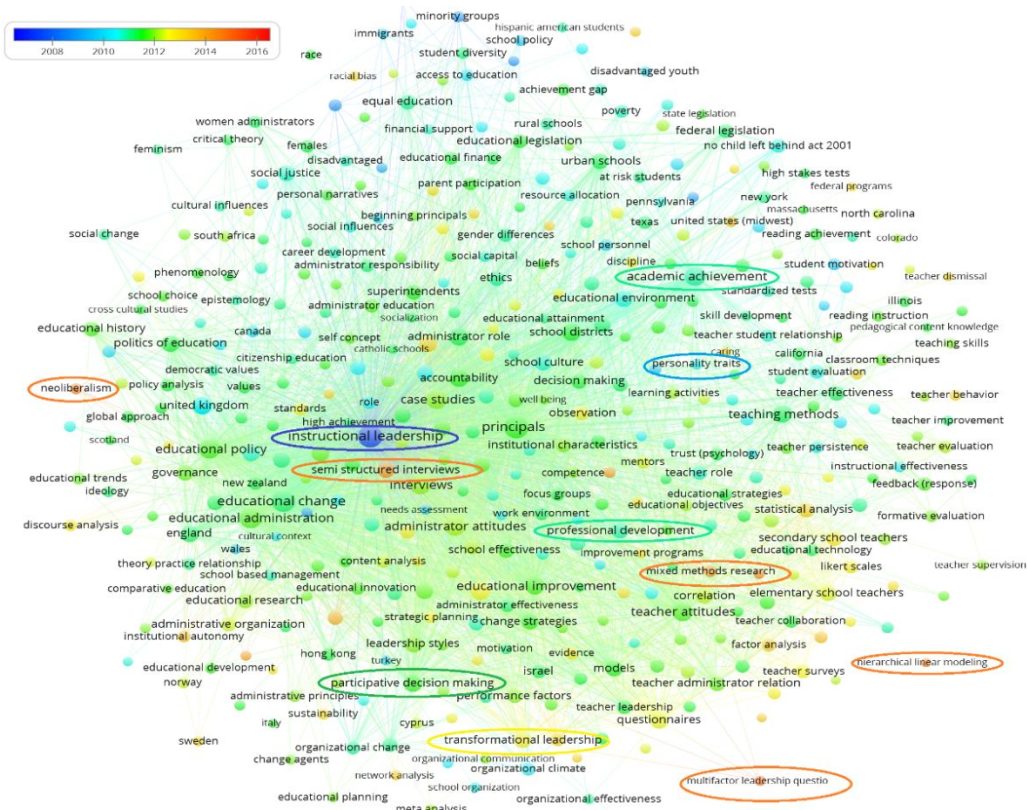


Figure 3. Timeline map: changes of researchers' interests.